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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/705,693      | 11/10/2003  | Mark Anthony Aubart  | IR 3663 CIP         | 5227             |

31684 7590 06/06/2006

ARKEMA INC.  
PATENT DEPARTMENT - 26TH FLOOR  
2000 MARKET STREET  
PHILADELPHIA, PA 19103-3222

EXAMINER

SANDERS, KRIELLION ANTIONETTE

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1714

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/705,693

Applicant(s)

AUBART ET AL.

Examiner

Kriellion A. Sanders

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gitlitz et al, US Patent No., 4,593,055.
3. Applicant's invention pertains to a copolymer of formula  $-[A]-[B]-$ , wherein A comprises  $\text{XSiR}_3$  and B is a residue of an ethylenically unsaturated monomer. The claims also indicate that the polymers have an erosion rate in seawater that is further set forth in claims 2, 3 and 8 as 2-15 microns per month.

Gitlitz et al discloses erodible antifouling marine paints, which include an organosilyl acrylate copolymer therein. The organosilyl acrylate copolymers of the patent correspond directly to those of applicant's claims and are produced from the copolymerization of organosilyl silyl acrylate or methacrylate and one or more ethylenically unsaturated monomers. The molar amount of organosilyl silyl acrylate or methacrylate monomer to ethylenically unsaturated comonomer, ranges from 10 to 80 parts per 100 parts of copolymer. See col. 3, line 25 through col. 5, line 37.

The erosion rate of the final paint is said to depend upon the total contributions of functional groups, comonomers and other components in the paint. It would have been obvious to one of ordinary skill in the art to produce an erodible antifouling marine paints, which includes an organosilyl acrylate copolymer therein and select specific functional groups, comonomers and other components within that paint so as to obtain an erosion rate in salt water of 2-15 microns per month.

Because the components and weight percentages of the presently claimed compositions are suggested by Gitlitz et al, the resulting polymers produced from these suggested components would inherently possess an erosion rate in seawater suitable for use as a binder in a marine antifouling paint.

### ***Response to Arguments***

1. Applicant's arguments filed 4/21/06 have been fully considered but they are not persuasive.

Applicant avers that Gitlitz et al does not teach every element of the present claims and therefor does not present a prima facie case of obviousness. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Applicant argues that the present claims require an erosion rate of the terpolymer in seawater of from 2-15 microns per month, while the antifouling paint compositions of Gitlitz have an erosion rate in seawater of at least 2 microns per month. Applicant suggests that the erosion rates of Gitlitz are based upon the total paint composition, whereas the erosion rates of the present claims are based just upon the terpolymer. First of all applicant is advised that the present claims do not recite "terpolymer". Furthermore, upon reconsideration, the disclosure at col. 8, lines 45-47 of Gitlitz indicates that the paint compositions have an erosion rate of at least 2 microns of paint film thickness per month. This would indicate that the thickness of the paint film erodes at a rate of at least 2 microns per month. Applicant is advised that according to Gitlitz, the paint film is composed of a copolymer binder as depicted by the formula of claim 1. That copolymer binder is essentially the same as the copolymers of applicant's claims. Therefore, Gitlitz discloses that the copolymer binder of the patented invention have an erosion rate of at least 2 microns per month. There is no clear differentiation between the units of erosion of applicant's claims and the units of erosion of Gitlitz. Both erosion rates are based upon the copolymers. The Gitlitz erosion rates overlap and encompass the erosion rates of applicant's claims, which are specified as being from 2-15 microns. Applicant is mistaken in alleging that the erosion rate specified in Gitlitz is based upon the interaction of the components of the total paint composition.

3. Applicant's argument that Gitlitz fails to teach or suggest that a copolymer containing 9 to about 20 mole percent of triarylsilyl(meth)acryloyl groups can be used in a marine antifouling paint and have an erosion rate in sea water of from 2-15 microns per month. Applicant further argues that Gitlitz teaches away from applicant's claims by exemplifying only polymers having

Art Unit: 1714

20 percent or more of any organosilyl groups. These arguments have not been found to be persuasive because if as applicant states, Gitlitz exemplifies only polymers having 20 percent or more of any organosilyl groups, then applicant's claim limitations have been met since the requirement for 20 percent or more organosilyl groups of Gitlitz overlaps the 9 to about 20 mole percent of triarylsilyl(meth)acrylol groups of applicant's claims. However claim 7 of Gitlitz teaches that the specific organosilyl moiety of claim 1 of the patent is present in an amount of 10-80 molar parts based on the copolymer binder. It is believed that applicant's molar ratio of triarylsilyl(meth)acrylol groups is met by patentee's claims 1 and 7.

### *Double Patenting*

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-21 are provisionally rejected on the ground of nonstatutory double patenting over claims 1-17 of copending Application No. 10/442,461. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: Because the components of both applications are essentially the same the present application is expected to possess the same functional properties in improved flexibility as the '461 application, even though said properties are not claimed. The present claims indicate that B represents one or more ethylenically unsaturated monomer copolymerizable with A. This limitation would suggest that B might include as many as two or more ethylenically unsaturated monomer copolymerizable with A.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

4. A terminal disclaimer or other indication of patentability is necessary to overcome this rejection.

### ***Conclusion***

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 1714

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kriellion A. Sanders  
Primary Examiner  
Art Unit 1714